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ABSTRACT

A hard mask 105 of SiCN is formed on a fluorine-containing carbon film 103. Thus, the adhesion of the hard mask 105 to the fluorine-containing carbon 103 is improved and inhibited from being peeled off. The hard mask 105 of SiCN can have a higher etch-selectivity than those of conventional hard masks, and can have a lower dielectric constant than that of SiN or SiC.